Application No.: Not Yet Assigned 10 Docket No.: 58399(47171)

## **ABSTRACT**

The present invention provides membrane cassettes and stacks thereof which are suitable for a use in a variety of electrochemical applications. The invention further provides membrane cassettes which comprise one or more composite membrane electrode assemblies which have a peripheral gasket where the gasket has at least one groove or channel for introducing and distributing a sealant about the cassette. In certain preferred embodiments, the invention provides cassettes and stacks which are suitable for use in fuel cell applications.